7-28-2000

DDASaccident271

Humanitarian Demining Accident and Incident Database
AID

DDAS Accident Report

Accident details

Report date:	18/05/2006	**Accident number:**	271
Accident time:	11:35	**Accident Date:**	28/07/2000
Where it occurred:	Nr Kralijane, SE of Peje	**Country:**	Kosovo
Primary cause:	Management/control inadequacy (?)	**Secondary cause:**	Inadequate training (?)
Class:	Missed-mine accident	**Date of main report:**	08/08/2000
ID original source:	KC/PS/JF	**Name of source:**	KMACC
Organisation:	Name removed		
Mine/device:	PMA-3 AP blast	**Ground condition:**	bushes/scrub woodland (light)
Date record created:	18/02/2004	**Date last modified:**	17/03/2004
No of victims:	2	**No of documents:**	2

Map details

Longitude:		**Latitude:**	
Alt. coord. system:	DN 59733 08945	**Coordinates fixed by:**	
Map east:		**Map north:**	
Map scale:		**Map series:**	
Map edition:		**Map sheet:**	
Map name:			

Accident Notes

inadequate medical provision (?)

visor not worn or worn raised (?)

mine/device found in "cleared" area (?)

inadequate area marking (?)

inadequate training (?)

Accident report

A Mine Accident Report was prepared for the country MACC and made available in August 2000. Statements from all the personnel at the site added considerable detail to the Accident

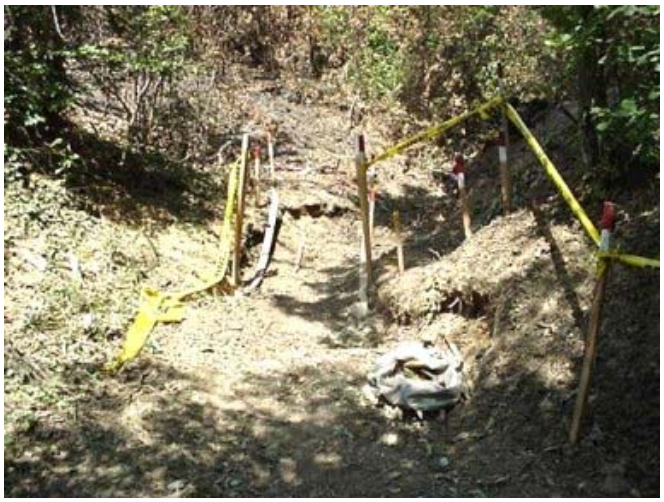
Report. Relevant parts are added to the summarised Accident Report in the following. See also the Internal accident report under Related papers.

The weather on the day of the accident was sunny with temperatures ranging from 25-30 degrees C. The demining group were using a one-man drill with two-man teams. Resting deminers waited in a designated Rest Area. Deminers changed roles every hour, on the hour.

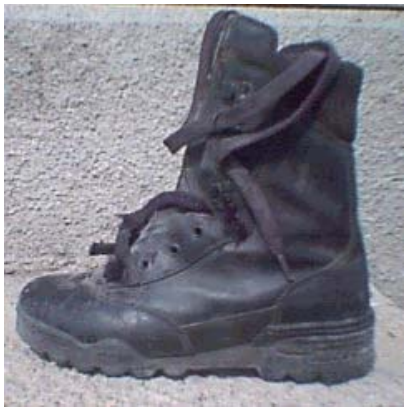
Victim No.1 was working in a lane at 11:30 when he paused for a "drinking rest". As he walked back down his lane he saw a PMA-3 two metres to one side in the uncleared area. He told the Platoon Commander about the mine.

At 11:35 Victim No.1 moved to edge of the cleared area to look at the mine he had seen and trod on a PMA-3 inside the area marked as cleared. "The victim walked/ran by himself to a safe area" where other deminers made him lie down and calmed him. The medics arrived and Victim No.1 was carried to the ambulance. He left for the Argentine KFOR hospital at 11:45 and arrived as 12:10. He was conscious at all times. The hospital released him "Later in the afternoon".

The photograph below shows the accident site.



Photographs of Victim No.1's PPE and boot showed that the visor was dusty and the boot apparently undamaged apart from broken laces (which may have been cut to remove it).



The photograph alongside shows the victim’s boot after the accident. It is not clear whether the laces were cut by the medics or broke in the explosion.

The Section Leader described calming Victim No.1 with difficulty "because he was stressed like never before".

A medic (one of four) reported that on the way to the accident he met Victim No.2 and stopped to help her.

A deminer reported meeting Victim No.2 on the way to accident and taking her to their vehicle (not an ambulance) and taking her to the hospital arriving at 12:07.

Another deminer reported that Victim No.2 "was very stressed, she couldn't walk… she was not injured only very upset…".

Another medic reported that Victim No.2 had "only some small fragments on her face".

Another medic reported that Victim No.1 "had only some fragments on his foot and hand and more fragments in his face".

Victim No.2 said that she went to drink some water and Victim No.1 was standing nearby when the mine detonated. She said she then "walked towards the start of the base lane". She made no mention of any injury, or of her own need for medical treatment.

Victim No.1 stated that he was at the entrance to his lane drinking water when he heard a bang. He asked for help and started to walk, then decided to lie down.

Conclusion

The investigators found that the site was not laid out in accordance with the group's SOPs and the access lane was only one meter wide instead of two. The demining group's SOPs were also not followed over "the use of the base stick" and this caused the mine to be missed.

They praised the Section Commander for stopping the victim from "running", but stated that "supervision was not in accordance with …SOPs".

Recommendations

The investigators recommended that the demining group "review their training programme for deminers and supervisors" as a result of this and previous accidents. Refresher courses for deminers and supervisors must be given, and should cover the behaviour of a casualty in the event of an accident. The demining group was recommended to take "appropriate disciplinary action" against personnel in breach of SOPs.

Victim Report

Victim number:	345	**Name:**	**Name removed**
Age:	20	**Gender:**	Male
Status:	deminer	**Fit for work:**	yes
Compensation:	not made available (insured)	**Time to hospital:**	35 minutes
Protection issued:	Frag jacket Helmet Short visor	**Protection used:**	not recorded

Summary of injuries:

INJURIES

minor Arms

minor Face

minor Foot

minor Hand

minor Hearing

minor Legs

COMMENT

See medical report.

Medical report

A brief medical report gave no detail of the injuries and concluded that "the medical treatment could have been much better", noting that there was "no oxygen and no scoop stretcher in the ambulance". The blood pressure of the victim was not taken because there was no blood pressure manometer in the ambulance. The medics had made no written record of treatment given and had to report verbally to the hospital.

Medical report (KMACC QA)

(This report has been edited for anonymity.)

Introduction

This report is based on statements and interviews with the medics and the victims.

Summary

There were two ambulances and 4 medics at location, at the time of the accident. One ambulance with driver and two medics were at the resting area close to the site, the other ambulance and medics were at the HLS.

When they heard the detonation and the radio call, they all went to the location of the accident with all their medical equipment.

The victims had gone by themselves to two different places in the safe area when the medics arrived at location.

Three of the medics went for [Victim No.1] who was most injured. He was lying down but he was conscious. He had minor wounds to his face, legs and arms. He had hearing problems and his eyes were red. He was calmed down and examined. His face was cleaned and he had bandage on his left foot and right arm, but he refused to have an intravenous cannula. He was then placed on a stretcher and taken to the first ambulance.

One of the medics stayed with [Victim No.2] who was standing up and crying. She had minor wounds to her face and hearing problems. She was calmed down and examined. Her face was cleaned and she was taken to the second ambulance but she was not placed on a stretcher.

Both victims were taken by ambulance to KFOR hospital in Gjakova, who had been informed about the accident by the medics on the radio. There was no medical treatment in the ambulance and none of the victims got oxygen.

The medics stayed at the hospital and reported to KFOR doctor by the emergency journal.

At KFOR hospital they both had intravenous fluid and X-ray, they were examined by the surgical doctor who found no serious injuries and they were both sent home after a few hours.

Time of accident 11.35 Time of arrival to hospital 12.10

There has been a debriefing for all personnel involved in the accident.

Conclusions:

The Casevac was performed according to SOP. However, the medical treatment gives some remarks:

- One of the victims was not placed on a stretcher
- None of the victims got intravenous cannula

- None of the victims got oxygen

Time from accident to arrival at hospital is 35 mins. This indicates a very high speed for the ambulance, which is not necessary for this type of injury.

High speed in this traffic and on this roads puts the victim and many other people in great danger and makes the Medics work in the ambulance more difficult

Recommendations

- Always place accident victim on a stretcher
- Always set intravenous cannula to accident victims
- Always give oxygen to mine accident victims
- The medic is in command of the ambulance and will always decide how it should be driven
- Always think of safety first when driving an ambulance.

Signed: MACC Medical QA

In December 2001, the MACC reported that Victim No.1 was still working as a deminer for the same demining group.

Victim Report

Victim number:	346	**Name:**	Valbona Avdijaj
Age:		**Gender:**	Female
Status:	deminer	**Fit for work:**	yes
Compensation:	not made available (insured)	**Time to hospital:**	33 minutes
Protection issued:	Frag jacket Helmet Short visor	**Protection used:**	not recorded

Summary of injuries:

INJURIES

minor Face

minor Hearing

COMMENT

See medical report. The victim also suffered shock.

Medical report (KMACC QA)

(This report has been edited for anonymity.)

Introduction

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Summary

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The victims had gone by themselves to two different places in the safe area when the medics arrived at location.

Three of the medics went for [Victim No.1] who was most injured. He was lying down but he was conscious. He had minor wounds to his face, legs and arms. He had hearing problems and his eyes were red. He was calmed down and examined. His face was cleaned and he had bandage on his left foot and right arm, but he refused to have an intravenous cannula. He was then placed on a stretcher and taken to the first ambulance.

One of the medics stayed with [Victim No.2] who was standing up and crying. She had minor wounds to her face and hearing problems. She was calmed down and examined. Her face was cleaned and she was taken to the second ambulance but she was not placed on a stretcher.

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Signed: MACC Medical QA

In December 2001 the MACC reported that Victim No.2 was still working as a deminer for the same demining group.

Analysis

The primary cause of this accident is listed as a *"Management/control inadequacy"* because the field supervisors were not enforcing safe operating procedures and the investigators identified a need for them to be better trained. Had the SOPs been enforced, the mine involved in the accident would have been found during normal clearance. The secondary cause is listed as *"Inadequate training"*.

The failure to provide appropriate medical equipment was a further management failing.

The injuries resulting from stepping on a PMA-3 vary from traumatic amputation to minor bruising. The picture below shows why this happens. The 35g Tetryl is in the top and centre of the mine. The area of pressure-plate surrounding the HE is actually larger than the area of pressure-plate over it. If a victim is fortunate, they step on the pressure plate but the explosive charge is not beneath their foot.

The detail recorded in the Accident Report was relatively poor (for this theatre). The investigators failed to mention the second victim (except on the cover) and details of her involvement came from witness statements. The facial injuries of both victims indicate that their visors were raised or not worn but they were supposed to be in a safe area (to drink) so this is probably not a breach of SOP.

Related papers

The only related paper made available to date is the internal demining group's accident report reproduced below (edited for anonymity).

Internal Demining group Accident report

Dated 28-07-00

Introduction

The mine accident took place at a location South-West of Klina between the villages of Kraljane and Jablanica. This mined area has been the location of numerous accidents in the past, two of which were [same demining group] employees. The platoon involved in the mine accident consisted of two sections, (one on leave) each section was controlled by a section commander. Both the sections were under the control of a platoon commander who was then being supervised by myself. The platoon consisted of 15 deminers with a four man medical team.

The minefield in which the platoon had been working consisted of Anti-personnel mines laid by Paramilitaries and MUP (Police). The VJ minefield record indicates both PMA 3 and PMR 2A in various configurations however these have been strengthened with peripheral areas being nuisance mined with no added reporting being done. The platoon had been working on this minefield since mid-May progress to date has been slow due to the dense vegetation and difficulty locating the start points on the VJ record.

Sequence of events

At approximately 1130hrs discussions were taking place with the 2 platoon commander, 3 platoon commander and the project manager about the development of the area of the site and future works to be carried out. During this time a radio message from the section commander that the deminer had located a PMA 3. The platoon commander queried this and once established that it was not in front of the deminer but in an adjacent area he informed him to ignore it and continue with the clearance as planned. At 1135hrs an explosion occurred in an area where 2 platoon was working. The platoon commander immediately went to investigate the accident. Once he had identified that it was a mine accident he sent a message to 51 base informing them. On hearing the explosion the medical team and nearby deminers responded immediately and moved to the accident site to assist. Once the medics had started their emergency treatment and it was identified that the injuries were not serious and could sustain a road move the ambulances were ordered closer in preparation for a road move to Gjakova.

At 1139hrs the accident report was sent via radio to 51 base. It was during this call that the patients were loaded into the ambulances and deployed to the Argentine KFOR hospital in Gjakova.

The casualties arrived at the KFOR hospital at 1207hrs a total travelling time of 28mins.

The project manager then confirmed that all deminers had stopped working and then tasked the platoon commanders to ensure that all personnel were to assemble at the admin area for a brief of the situation. The accident site was recorded via sketch/photograph and the scene secured for the investigation team.

The remaining personnel were then informed of the situation and then returned to base to write statements of their involvement in/knowledge of the accident. Soon after arriving back at the base location the ambulances returned from Gjakova and informed the project manager that both casualties would be returning to Peje the same evening. The UNMACC Ops Officer was informed and he confirmed that an investigation team was to visit the next morning at 0900hrs. [Demining group]'s program manager and head office were informed of the situation.

Details of the accident

[The victim] was visually checking what he thought to be a PMA-3 that was away from his clearance lane on the other side of the marking tape and in the dangerous area. He had just had a drink of water at the rear of the accident site with a fellow deminer, [Victim No.2] and had brought her down to see the mine as she was not familiar with them in their virgin state. He was still inside the marked area with [Victim No.2] beside him when he initiated a PMA-3 mine with his left foot.

Summary

It appears at this stage that the SOPs were not complied with when the deminers cleared the strip of ground where this accident happened. The need for this narrow strip to be cleared came about when it was identified that the lane needed to be widened to facilitate a Casevac safely.

Signed: Project Manager